

WHAT IS CLAIMED IS:

1. An alternator tester, comprising:
 - a alternator output measurement circuit configured to measure an electrical output of an alternator;
 - a motor configured to couple to the alternator and cause the alternator to rotate thereby generating the electrical output;
 - a microprocessor configured to determine an alternator condition as a function of the electrical output, on the microprocessor further configured to encrypt information and provide an encrypted output which is related to the alternator electrical output.
2. The apparatus of claim 1 wherein the microprocessor is further configured to encrypt date information related to a date of a test and wherein the encrypted output includes date information.
3. The apparatus of claim 1 wherein the microprocessor is further configured to encrypt time information related to a time of a test and wherein the encrypted output includes time information.
4. The apparatus of claim 1 wherein the microprocessor is further configured to measure an alternator ripple voltage and wherein the encrypted output includes information related to the alternator ripple voltage.

5. The apparatus of claim 1 wherein the microprocessor is further configured to encrypt a rating related to the alternator and wherein the encrypted output includes rating information.

6. The apparatus of claim 1 wherein the microprocessor maintains a number of sequence of a test and the encrypted output includes number of sequence information.

7. The apparatus of claim 1 wherein the microprocessor is further configured to encrypt information which identifies an alternator under test and wherein the encrypted output includes alternator identification information.

8. The apparatus of claim 1 wherein the microprocessor is further configured to encrypt information related to who performed the test.

9. The apparatus of claim 8 wherein the information related to who performed the test comprises information which identifies a dealer or shop.

10. The apparatus of claim 1 wherein the microprocessor is further configured to encrypt temperature information and wherein the encrypted output includes temperature information.

11. The apparatus of claim 1 including a user input and wherein the microprocessor is further configured to encrypt the user input and the encrypted

output includes user input information.

12 The apparatus of claim 1 wherein the encrypted output comprises a visual display.

13. The apparatus of claim 1 wherein the encrypted output comprises a data transmission.

14. The apparatus of claim 13 wherein the data transmission comprises an infra red transmission.

15. The apparatus of claim 13 wherein the data transmission comprises an RF transmission.

16. The apparatus of claim 13 wherein the data transmission comprises a modem link.

17. The apparatus of claim 1 wherein the encrypted output comprises an alpha numeric code.

18. The apparatus of claim 1 wherein the encrypted output includes the alternator condition.

19. The apparatus of claim 1 wherein the motor is controlled by the microprocessor.

20. The apparatus of claim 1 including a load coupled to the alternator electrical output.

21. The apparatus of claim 20 wherein the load is controlled by the microprocessor.

22. A method of testing an alternator,

comprising:

measuring an alternator electrical output
related to operation of the alternator
;
determining an alternator condition as a
function of the alternator output;
encrypting data related to the alternator
output; and
outputting the encrypted data.

23. The method of claim 22 wherein the encrypted data includes date information.

24. The method of claim 22 wherein the encrypted data includes time information.

25. The method of claim 22 wherein the encrypted data includes the alternator condition.

26. The method of claim 22 including measuring an alternator ripple voltage and wherein the encrypted data includes information related to alternator ripple voltage.

27. The method of claim 22 including encrypting a rating related to the alternator automotive vehicle electrical system and wherein the encrypted data includes alternator rating information.

28. The method of claim 22 including maintaining a number of sequence of a test and wherein the encrypted data includes number of sequence information.

29. The method of claim 22 including encrypting information which identifies an alternator under test and wherein the encrypted data includes alternator identification information.

30. The method of claim 22 wherein the encrypted output includes information related to who performed the test.

31. The method of claim 30 wherein the information related to who performed the test comprises information which identifies a dealer or shop.

32. The method of claim 22 including encrypting temperature information and wherein the encrypted data includes temperature information.

33. The method of claim 22 including receiving a user input and encrypting the user input and wherein the encrypted data includes user input information.

34. The method of claim 22 wherein outputting comprises providing a visual display.

35. The method of claim 22 wherein outputting comprises providing a data transmission.

36. The method of claim 35 wherein the data transmission comprises an infra red transmission.

37. The method of claim 35 wherein the data

transmission comprises an RF transmission.

38. The method of claim 35 wherein the data transmission comprises a modem link.

39. The method of claim 22 wherein the encrypted data comprises an alpha numeric code.

40. The method of claim 22 including rotating the alternator with a motor.

41. The method of claim 40 including controlling operation of the motor.

42. The method of claim 22 including applying a load to the alternator electrical output.

43. The method of claim 42 including controlling the load.